

## **ATTACHMENT FOREWORD**

The attachments to Volume X of the CMS Report are included to 1) provide necessary details that support the discussion in the main body of the text that would have been distracting to the reader if included in the main body, and 2) provide historical documents in electronic format to allow the reader to easily locate information contained in references cited. The following summary is included as a guide to the extensive contents of each section's attachments:

### **SECTION 1.0**

#### **Attachment S1A – Uplands Corrective Measures Study Volumes III through IX**

- **Part A - Plant 2 Study Area Data Gap Investigation Work Plans**
- **Part B – Investigation Data Reports**

Volumes IIIa through IXa contain the Plant 2 study area data gap investigation (DGI) work plans. Each work plan provides background information and presents the scope of work and methodology for completing gaps in soil and groundwater data that were required at the time to supplement data and support the remedial alternative recommendation process. Volumes IIIb through IXb are the data reports that present the results of the DGI for each respective study area.

The following list identifies respective Plant 2 study areas and Volumes:

- Volume III Parts a & b, South Yard Area
- Volume IV Parts a & b, 2-60 Area
- Volume V Parts a & b, 2-40s Area
- Volume VI Parts a & b, 2-66 Area
- Volume VII Parts a & b, 2-10 Area
- Volume VIII Parts a & b, 2-31 Area and
- Volume IX Parts a & b, North Area

### **SECTION 2.0**

**Attachment S2A - Revisions to the TMCLs** contains the *Revision of TMCLs to Incorporate IRIS Toxicity Updates and to Correct Errors in the TMCL Technical Memorandum* (Floyd|Snider revised July 2014), which is supported by:

Correspondence between Will Ernst and USEPA (Holly Arrigoni) regarding typos and errors in the original TMCL document, and

Memorandum *OEA Recommendations Regarding Trichloroethylene Toxicity in Human Health Assessments* (USEPA 2012).

**Attachment S2B - Analytical Considerations for Groundwater Compliance** contains the Memorandum *Specialized Analytical Considerations for Evaluation of Compliance with Groundwater TMCLs* (Floyd |Snider July 2014).

**Attachment S2C - Background Considerations** provides a written response to USEPA Comments of February 23, 2006 regarding *Technical Memorandum: Development and Use of Background Values* and a copy of the revised document dated March 30, 2006, which is supported by:

## **Attachment Foreword: Corrective Measures Study Report Boeing Plant 2**

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*Technical Memorandum Development of Proposed Soil cPAH FMCLs Including Consideration of Urban Background Concentrations (Floyd|Snider 2014)*

**Attachment S2D - PQL Considerations** contains the Memorandum *Groundwater Monitoring Compliance for Constituents with Risk Based Criteria Lower than the Practical Quantitation Limit* (Floyd|Snider June 2014)

**Attachment S2E – Draft Environmental Covenant with Anticipated Language** provides an example of the draft Environmental Covenant (EC) text that will be coordinated between USEPA and Boeing. The EC is not ready for formal submittal and is included as a draft (not for comment) in Volume X, but will be completed upon completion of the SOB.

### **SECTION 3.0**

**Attachment S3A – Soil Interim Measures and Construction Projects Documentation for Table 3-1** provides electronic copies of the documents cited in Table 3-1 in order presented in the “Soil Excavation ID” column of the table.

**Attachment S3B1 – Table S3B-1 Sample Locations Representative of Plant 2 Soils Relocated for Use as Backfill in the 2-40s Area Demolition/Redevelopment Project** identifies soil sample locations collected as part of the 2010-2012 2-31, 2-40s, and 2-60s Demolition/Redevelopment project. Relocated soil placements are presented in Figure 3-3.

**Attachment S3B2 - Table S3B-2 Crushed Concrete Backfill Analytical Data Summary 2-31, 2-40s, and 2-60s Demolition/Redevelopment Areas** provides the analytical results for crushed concrete samples used as backfill during the 2010-2012 2-31, 2-40s, and 2-60s Demolition/Redevelopment project subject to the associated TSCA RBDA. Crushed concrete sample locations are presented in Figure 3-4.

**Attachment S3B3 and S3B4** provides the analytical data representative of soil imported by contractors for use as backfill for the 2010-2012 2-31, 2-40s, and 2-60s Demolition/Redevelopment project. Imported soil placement locations are presented in Figure 3-3.

**Attachment S3C1 – Plant 2 Groundwater Interim Measures Descriptions** provides a summary of the groundwater interim measures performed at Plant 2 independently or in conjunction with the 2010-2012 2-31, 2-40s, and 2-60s Demolition/Redevelopment project.

**Attachment S3C2 - Groundwater Interim Measures Documentation for Table 3-2** provides electronic copies of the documents cited in Table 3-2 in the order listed in the “Associated Documentation” column of the table.

### **SECTION 4.0**

**Attachment S4A – Soil Data Tables** present soil data by constituent generated post-DGI, August 30, 2010 through December 31, 2016, as the cut off for soil data used in this document. Data prior to August 2010 are contained in Volumes III through IX of the CMS Report referenced above.

**Attachment S4B1 Data Gap Investigation Groundwater Data Replacement Instances** identifies the specific instances in which DGI groundwater data were replaced with more recent data.

**Attachment S4B2 Groundwater COC Maps** provides figures that present groundwater data by constituent based on DGI data, with the exception of the specific instances identified in Attachment S4B1.

## **SECTION 5.0**

**Attachment S5A1, Federal Remediation Technologies Roundtable (FRTR) Treatment Technology Screening Matrix** presents treatment technologies for six classification groups of COCs (which are similar to but not identical to the Plant 2 COC groups) and rates them. Technologies rated as average or above average for one or more of the Plant 2 COC groups were retained for further evaluation.

**Attachment S5A2, Table S5A2 Treatment Technology Screening Matrix Contaminant Classifications Linked to Plant 2 COPC Groups** lists the Plant 2 COPC groupings and individual COCs included in each grouping, and indicates where they fit within the six applicable FRTR contaminant classifications.

**Attachment S5A3, Potential Remedial Technology Summary** provides descriptions of the remedial technologies rated as “average” or above average” for the soil and groundwater COCs at Plant 2 and identifies whether the technology was retained for further evaluation in assembling alternatives in Section 6.

## **SECTION 6.0**

**Attachment S6A1, Well Network and Monitoring Program Descriptions** provides a description of the proposed Plant 2 monitoring well network and the purpose of each class of well. Attachment S6A1 includes three tables:

1. S6A1-1: Proposed Plant 2 Shoreline Monitoring Well Network Summary
2. S6A1-2: Proposed Plant 2 Upgradient Monitoring Well Network Summary
3. S6A1-3: Proposed Plant 2 Property Boundary Monitoring Well Network Summary

The tables provide details for the individual wells in each of the three primary classes of monitoring wells. A figure presenting the monitoring well locations is also provided in Attachment S6A1.

**Attachment S6B, CMI Phase Monitoring Well Installation Work Plan** presents groundwater conditions at Plant 2 and identifies the proposed locations of replacement monitoring wells decommissioned in association with the 2-31, 2-40s, and 2-60s Demolition/Redevelopment project, other various construction projects and damaged wells, and identifies new monitoring network wells. In addition, the well specifications for installation of the wells are provided in the work plan. Boeing has partially completed the scope of work outlined in the work plan and will complete the scope of work based on finalization of the SOB.

**Attachment S6C, RCRA Remedial Alternative Evaluation Standards and Alternative Evaluation** defines the RCRA standards used to evaluate the corrective measure alternatives for Remediation Areas RA 1 through RA 8 and provides details of the remedial alternative evaluation for each RA subject to the process outlined in Section 6.5.

**Attachment S6D, Alternative Cost Estimates** presents the cost estimates for values used in the remedial alternative evaluations presented in Section 6 and Attachment S6C.